

In the Office Action's "Claim Objections" Section:

A. The Examiner stated "Claims 1-4 are objected to because of the following informalities:

1. Throughout the claims there is improper capitalization of words; since claims are in one sentence format there should only be the first word capitalized.

Response: See modified claims for proper capitalization.

2. The preamble is vague and indefinite as to whether a skidsteer loader, or a backhoe or similar work-type vehicle is being claimed, furthermore "or similar work-type vehicle" is vague and indefinite on its own since the meets and bounds of what is similar and what is not is not clear.

Response: See modified claims for clarification to address Applicant's vague and indefinite statements.

3. Also, the preamble includes "for use in constructing a skimmer box" which is method claim language in preamble in an apparatus claim which should be deleted.

Response: See modified claims.

4. It is unclear from the preamble if an attachment or a skimmer box is to be claimed.

Response: The Claims and specification have been modified to clarify that an attachment is claimed and not a skimmer box. The area removed at the top of the swimming pool for the installation of the skimmer is known in the industry as the "skimmer box" and is generally rectangular in shape.

5. On line 6 of Claim 1, "the arms" lacks antecedent basis.

Response: See modified Claim 1.

6. On line 9 of Claim 1, the “two open cutouts” are not functionally related to the other elements and should be claimed with relation to other elements, for example where or on which element the cutouts are made.

Response: See modified Claim 1.

7. Claims 2 and 3 include “#” on lines 1 respectively and should be deleted.

Response: See modified Claims 2 and 3 for correction.

In the Office Action's "Claim Rejections – 35 USC § 102" Section:

B. The Examiner stated

"Claims 1 and 4 are rejected under 35 USC § 102(b) as being anticipated by Pullman 5,909,961. Pullman discloses a digging attachment and method of constructing that attachment (16) for securement to a work-type vehicle that could be used as a skimmer box for a swimming pool, having a connecting frame (24) with extensions (22A) near the bottom of said connecting frame allowing for the connection to a vehicle latching mechanism; a base (16), shaped like a box, with five sides and an open end, including a top side (26/27), a bottom side, a left side (19), a right side (18) and a back side (16) as well as two open cutouts (unnumbered openings on top side); the said open side has edges (60) that are shaped to cut through the surface; the back side of said base (16) connected perpendicular to said connecting frame (14) and near the bottom so that the base is directed just above the latching mechanism and along the opposite side of the extensions providing support when the vehicle is attached."

Response:

We rely on two standards to guide our discussion. "To find anticipation of claims, a challenger must show that every element of the claimed invention must be identically shown in a single reference." *In re Bond*, 910 F.2d 831, 15 U.S.P.Q. 2d.1566,1567,1568 (Fed. Circ. 1990). "Any degree of physical difference, however slight, invalidates claims of anticipation." *Ultradent Products Inc. v. Life-Like Cosmetics, Inc.*, 39 U.S.P.Q. 2d 1969, 1980 9Utah 1996).

1) The Examiner mentions above that reference Pullman can be used as a "skimmer box" for a swimming pool.

Response: We believe there is some confusion as to the term skimmer box. This invention is an attachment that is attached to a work-type vehicle and is used during in-ground swimming pool construction process that forms the shape of an area at the top of the pool used for the installation of a skimmer and known industry wide as a "skimmer box." A skimmer is a device used in association with a pump and filter used to "skim"

water and debris for swimming pool cleaning and maintenance. Webster's dictionary defines a box as "a container, case, or receptacle, usually rectangular". The industry standard for in-ground swimming pool construction is to form a rectangular box shape for the installation of the skimmer.

2) The Examiner stated that Pullman has "a connecting frame (24) with extensions (22A) near the bottom of said connecting frame allowing for the connection to a vehicle latching mechanism; a base (16), shaped like a box, with five sides and an open end, including a top side (26/27), a bottom side, a left side(19), a right side (18) and a back side (16)."

Response: We believe Pullman does not have a base, shaped like a "box". A box being usually rectangular shaped per dictionary definition and per the swimming pool industry standard of a "skimmer box" shape. Pullman has a bottom side, left side, right side and back side. However, Pullman does not have a top side but a "pair of substantially flat brace members." (Column 2, Line 51-54). As stated in Pullman, "...the side walls 18,19 are strengthened with a pair of substantially flat brace members 26,27 being attached to the back wall 16 and to the side walls 18,19 at the top ends 21C, 22C thereof."

Our invention per the Specification Paragraph 4, "pertains to an attachment to be used as a tool for forming a skimmer box." As stated in Paragraph 5 of the specification "current attachments are not specifically shaped to form a skimmer box and skimmer boxes are formed today by manually digging and shaping the hole for the skimmer box." In paragraph 6 of the Specification, after inserting the attachment, the "skimmer box structure is formed" and thus reducing "the amount of gunite required in the swimming pool construction process due to the skimmer box wall being cut to size by the invention." Per paragraph 8 of the specification, the open side of the invention is defined by "Fig. 2 shows the open side of the structure 11 that is used to make initial contact with the swimming pool wall for forming the skimmer box." The invention describes being "aligned" and "inserting fully into the ground."

3) The Examiner stated Pullman has "two open cutouts (unnumbered openings on top side)."

Response: We believe Pullman does not have cutouts but an entire opening. We have clarified the location of the cutouts in the Claims, Specification and drawing as shown attached to be on the top and back sides. Per paragraph 8 of the Specification, "Structure 11 also includes a hole (cutout) on the top side of the box to allow for pressure relief when inserting in a wall."

4) The Examiner stated that Pullman has "said open side has edges (60) that are shaped to cut through the surface"

Response: Pullman has "an edge" but not "edges" as defining our open side by the top side, bottom side, left side and right side. Pullman specifically refers to "a curved edge." As discussed above, Pullman does not have a top side but a "pair of substantially flat brace members." (Column 2, Line 51-54). In addition, the left side and right side of Pullman do not have edges. Pullman was designed to be used with only the bottom side with curved edge for contacting surface.

5) The Examiner stated that Pullman anticipates Claim 4.

Response: Pullman makes no reference to the steps of "b) moving the attachment to the swimming pool wall," nor "c) raising and aligning the attachment to near the top of the wall surface where the skimmer box is to be located" nor "e) raising the attachment to remove the dirt and other items from the wall and thus forming the shape for the skimmer box."

Pullman discloses the process of "lowering and tilting forward the bucket to the ground where the ditch is to be made and uses the utility vehicle to push the bucket forward through the ground whereupon the longitudinal front edge of the bottom wall cuts and digs into the ground" and thus forming a "round bottom ditch" (Column 2 Lines 57 - 64). Therefore, we believe Pullman does not anticipate Claim 4.

In the Office Action's "Claim Rejections – 35 USC § 103" Section:

1) The Examiner states:

" Claims 2 and 3 are rejected under 35 USC § 103(a) as being unpatentable over Pullman 5,909,961 alone. As concerns claims 2-3, it would have been an obvious matter of design choice to modify Pullman to include the range of as 15 to 30 inches wide by 15 to 30 inches high by 15 to 30 inches deep (Claim 2), or 24 inches wide by 28 inches high by 28 inches deep (Claim 3) since applicant has not disclosed that these ranges solve any particular problem or purpose and it appears other similar ranges would work equally well. Furthermore, routine experimentation would lead one of ordinary skill in the art to these ranges."

RESPONSE:

Non Analogous Art

To rely on a reference under 35 U.S.C. 103, it must be analogous prior art. To rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the invention was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. (1992)). Pullman should not be relied upon as a reference because it is not in Applicant's field of endeavor nor reasonably pertinent to the particular problem with which the invention is concerned.

Ditch digging requires different considerations than skimmer box construction. Pullman's ditch digging apparatus is to be used to dig ditches along roads and fields and is not in the field of the applicant's endeavor of constructing inground gunite swimming pools. The purpose of Pullman's ditch digging invention is to form round bottoms and shape the bottom of a surface. The purpose of skimmer box construction is to form a specific shape and size at the wall of the pool for the skimmer box. Skimmer boxes are traditionally rectangular in shape in the pool industry. "The invention quickly forms the skimmer box structure in seconds with very smooth walls and little effort" (Paragraph 6 - Brief Summary of Invention). "This invention significantly reduces the time required to prepare the skimmer box for a swimming pool" (Paragraph 7 - Brief Summary of Invention). "The use of the invention will reduce the amount of gunite required in the

swimming pool construction process due to the skimmer box wall being cut to size by the invention" (Paragraph 8 - Brief Summary of Invention).

Pullman's ditch digging device is to be used along roads and fields and is not reasonably pertinent to the particular problem with which the invention was concerned. The invention was concerned with using precision to reduce the time, material and effort required to construct a "skimmer box" or the hole for the skimmer during swimming pool construction. The digging of smooth walls is currently performed manually. Manual digging is time intensive and requires much physical work and can be dangerous. Smooth walls, needed for the skimmer box, reduce the costs of the gunite. Creating the smooth walls with the invention reduces the time to build the skimmer box, reduces the chance of injury from manual digging and reduces the amount and cost of gunite concrete needed to coat the skimmer box walls.

Therefore, we believe Pullman should not be used a reference under 35 U.S.C. 103.

Look at the Invention as a whole - including the problem solved

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983). The invention as a whole embraces the structure, its properties and the problem it solves. The particular problem facing the inventor must be considered in determining obviousness of its creation. Thus, the question is whether what the inventor did would have been obvious to one of ordinary skill in the art attempting to solve the problem upon which the inventor was working. The problem solved by the invention is always relevant. *In re Wright* 848 F.2d 1216, 6 U.S. P.Q. 1959, 1961, 1962 (Fed. Cir. 1988).

The purpose of Pullman is to "form a ditch in one single longitudinal pass through the ground." We read Pullman as having a vertically radiused bottom wall that does not solve the problems that our invention does in terms of reducing gunite. There is no mention of swimming pool construction or forming a shape of a skimmer box. Skimmer box sizes typically fit within a 15-30 inch by 15-30 inch area shape comfortably and forming this size shape saves gunite. Within paragraph 5 of the application, we have

stated that "current attachments used on skidsteer loaders are not shaped specifically to form a skimmer box and skimmer boxes are formed today by manually digging and shaping the hole for the skimmer box."

Pullman is not concerned with the problem of gunite costs which can be considerable. Much of the time required in the manual digging process is to smooth the walls. We believe it would not have been obvious to one of ordinary skill in the art attempting to build a skimmer box to build the invention and use in such a manner.

Negative teachings

As mentioned, "complicated bucket maneuvering" would be required if someone attempted to use a standard bucket with a work type vehicle to build a skimmer box, this would cause damage to the walls of the pool and would not be able to form the smooth walls. In addition, those involved with building swimming pools understand that much equipment and individuals are required and needed to be brought to a work site including: large work type equipment and the standard buckets carried on extended trailers. Thus, designing another large attachment or tool needed to be brought to a work site for building a swimming pool would have been discouraged and a deterrent to making the invention. Also, as the Examiner suggests to modify Pullman ditch digging device "to be in dimensions suitable for accommodating a standard size skimmer box, such as 15 to 30 inches wide by 15 to 30 inches high by 15 to 30 inches deep (claim 2) or 24 inches wide by 28 inches high by 28 inches deep (claim 3)" would be discouraged to a person having ordinary skill in the art of ditch digging. Pullman states that the radius should be 6.5 feet to as little as 2 feet and further be substantially symmetrical to facilitate the round bottom ditches" (Lines 23-25).

The fact that the prior art contains negative teachings, which would have discouraged and deterred a person having ordinary skill in the art from making the invention, is further evidence of non-obviousness. *Mobil Oil Corp. v. W.R. Grace & Co.*, 367 F.Supp. 207, 180 U.S.P.Q. 418, 452 (Conn. 1973).

Obviousness under 35 U.S.C. 103 is a question of law. Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure. (*Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 18 U.S.P.Q. 2d 1016, 1022 (Fed. Cir. 1991)). There is no suggestion nor expectation of success in

Pullman that a digging device could be made 15 to 30 inches length, width and height. There is no suggestion nor expectation of success in Pullman that a ditch digging device could be used to form a skimmer box for a swimming pool.

Even if a ditch digging device as described in Pullman were to be made the size of a typical skimmer box (contrary to a ditch digging size), it would be unsuitable for forming a skimmer box because of the rounded bottom.

Therefore, it was not shown that there is either a suggestion in the art to produce the claimed invention nor a compelling motivation based on sound scientific principles.

Ordinary skill in the art

We believe it is not obvious to one of ordinary skill in the art to design the base to be any suitable dimensions or to use Pullman to construct the skimmer box.. Pullman discloses a "ditch digging device" and not an attachment for "forming" or "constructing" a "skimmer box". A ditch digging device is designed to "cut into the ground" (Column 1 Line 58) and form the ditch.

The Examiner stated "Furthermore, routine experimentation would lead one of ordinary skill in the art to these ranges." We disagree in that skimmer box construction emphasizes precision, smooth wall(s) and a set volume. The purpose of skimmer box construction is to form a specific shape and size at the wall of the pool. "The invention quickly forms the skimmer box structure in seconds with very smooth walls and little effort." (Paragraph 6 -Brief Summary of Invention) "This invention significantly reduces the time required to prepare the skimmer box for a swimming pool." (Paragraph 7 - Brief Summary of Invention) "The use of the invention will reduce the amount of gunite required in the swimming pool construction process due to the skimmer box wall being cut to size by the invention." (Paragraph 8 - Brief Summary of Invention). The issue of obviousness is determined entirely with reference to a hypothetical "person having ordinary skill in the art." It is only that person who is presumed to be aware of all the pertinent art. We believe experimentation to shrink the size of the digging device would defeat the purpose of ditch digging for volume.

Modification renders unsatisfactory for intended purpose and changes principle operation

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). The Examiner suggests using Pullman to attach to a work type vehicle to form a skimmer box. This would however require modifying Pullman to remove the rounded bottom wall and render the prior art unsatisfactory for its intended purpose of ditch digging and cutting through the ground and forming the ditch. This modification would not work for use as a skimmer box forming tool as the rounded bottom wall would cut into the pool wall and form a curve along the bottom of the box where the skimmer is to be installed requiring additional gunite. In addition, Pullman would be required to be reduced in size to form the skimmer box.

These suggested modification would change the principle of operation of the reference and thus there is no suggestion or motivation to make the proposed changes. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) :

Lack of implementation

If the invention were in fact obvious, because of its advantages, those skilled in the art surely would have implemented it by now. Many swimming pools are constructed everyday with work type vehicles but no such attachment for forming a skimmer box has been formed even though the dangers of manually digging and the time requirements of manually digging are well known. The fact that those skilled in the art have not implemented the invention, despite its great advantages, indicates that the invention is not obvious. Especially regarding Claim #4, the method, the savings in time, costs and effort are significant.

Secondary Considerations

In addition, the secondary consideration of obviousness should be considered. These include: the long felt but unsolved needs, commercial success and prior unsuccessful attempts to solve the problem addressed by the invention. These are valid

and relevant criteria in determining the level of ordinary skill in the relevant art and therefore, in determining obviousness. *Sarkisian v. Winn-Proof Corp.*, 696 F.2d 1313, 217 U.S.P.Q. 702, 709 (9th Cir. 1983).

We are providing supplemental evidence of affidavits from two individuals with over 35 years experience in the industry of swimming pool construction attesting to the commercial success and long felt but unsolved needs of the skimmer box device.